



Volunteer Lake Assessment Program Individual Lake Reports

GILMORE POND, JAFFREY, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	299	Max. Depth (m):	13.1	Flushing Rate (yr ⁻¹)	0.4
Surface Area (Ac.):	115	Mean Depth (m):	3.7	P Retention Coef:	0.86
Shore Length (m):	4,000	Volume (m ³):	1,736,500	Elevation (ft):	1052

TROPHIC CLASSIFICATION

Year	Trophic class
2001	OLIGOTROPHIC
2006	OLIGOTROPHIC

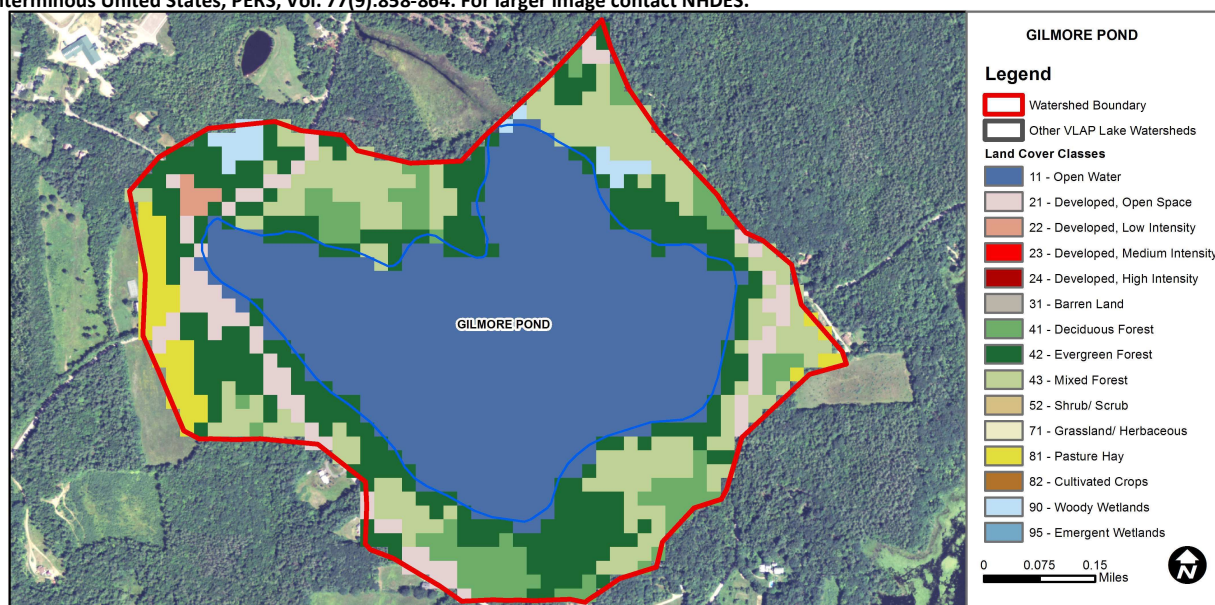
KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
	pH	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	D.O. (mg/L)	Very Good	At least 10 samples with 0 exceedances of criteria.
	D.O. (% sat)	Very Good	At least 10 samples with 0 exceedances of criteria.
	Chlorophyll-a	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
Primary Contact Recreation	E. coli	Encouraging	>2 samples exist that are > 75% of geometric mean criteria, but not enough samples to calculate geometric mean. No single sample exceedances. More data needed.
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	44.4	Barren Land	0	Grassland/Herbaceous	0
Developed-Open Space	5.88	Deciduous Forest	7.22	Pasture Hay	3.14
Developed-Low Intensity	0.47	Evergreen Forest	21.8	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	15.92	Woody Wetlands	1.41
Developed-High Intensity	0	Shrub-Scrub	0	Emergent Wetlands	0



VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

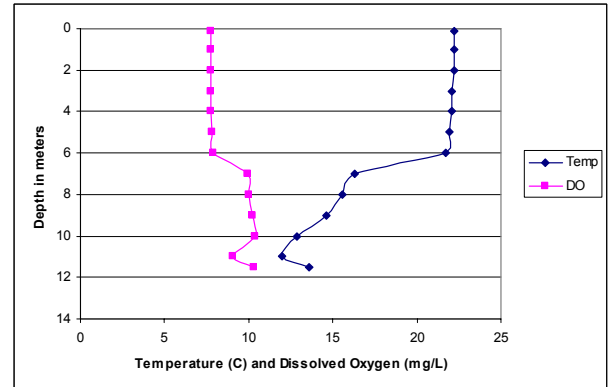
GILMORE POND, JAFFREY, NH

2012 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (Refer to Table 1 and Historical Deep Spot Data Graphic)

- 🔥 **CHLOROPHYLL-A:** Chlorophyll levels were low throughout the summer and were much less than the NH lake median. Historical trend analysis indicates a relatively stable chlorophyll level since monitoring began.
- 🔥 **CONDUCTIVITY/CHLORIDE:** Conductivity and chloride were elevated and much greater than the NH lake median values.
- 🔥 **TOTAL PHOSPHORUS:** Deep spot phosphorus levels were relatively low and less than NH lake median. Historical trend analysis indicates epilimnetic (upper water layer) phosphorus levels tend to fluctuate from year to year. Outlet phosphorus levels were elevated in July and the turbidity was also elevated.
- 🔥 **TRANSPARENCY:** Lake transparency was slightly lower than previous years, however well above the NH lake median. Historical trend analysis indicates a relatively stable lake transparency since monitoring began.
- 🔥 **TURBIDITY:** Outlet turbidity levels were elevated in July, potentially due to low flow conditions and a small amount of sediment and/or organic debris in the sample.
- 🔥 **pH:** pH levels were lower than desirable and potentially critical to aquatic life.
- 🔥 **RECOMMENDED ACTIONS:** Discuss the possibility of a low salt zone or salt alternative for local roads to help address the elevated chloride and conductivity. Keep up the great work!

Dissolved Oxygen & Temperature Profile



Station Name	Table 1. 2012 Average Water Quality Data for GILMORE POND								
	Alk.	Chlor-a	Chloride	Cond.	Total P	Trans.		Turb.	pH
	mg/l	ug/l	mg/l	uS/cm	ug/l	m		ntu	
						NVS	VS		
Deep Epilimnion	2.4	1.51	35	166.3	5	8.35	8.77	0.55	6.43
Deep Metalimnion				141.0	7			0.70	6.50
Deep Hypolimnion				165.8	10			0.99	6.40
Outlet				171.8	17			1.37	5.69

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.

Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m³
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.

Chloride: < 230 mg/L (chronic)
E. coli: > 88 cts/100 mL – public beach
E. coli: > 406 cts/100 mL – surface waters
Turbidity: > 10 NTU above natural level
pH: 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation
Chlorophyll-a	Stable	Data not significantly increasing or decreasing.
Transparency	Stable	Data not significantly increasing or decreasing.
Phosphorus (epilimnion)	Variable	Data fluctuate annually, but are not significantly increasing or decreasing.

This report was generated by the NH DES Volunteer Lake Assessment Program (VLAP). For more information contact:
 Sara Steiner
 PO Box 95
 Concord, NH 03302-0095
 (603) 271-2658
 sara.steiner@des.nh.gov



Historical Deep Spot Chlorophyll-a, Epilimnetic Total Phosphorus & Transparency Data

